

WE CLAIM:

1. A method of identifying new nodes on a bus following a reset comprising:
maintaining old data identifying connectedness between nodes present on the bus
5 prior to the reset and new data identifying connectedness between nodes present on the bus
after the reset;
matching a host node in the old data with a host node in the new data such that the
host nodes in the old and new data become identified as matching nodes corresponding to
one another;
10 identifying nodes in the new data having a same connection to an identified
matching node as nodes in the old data to the corresponding matching node so as to
identify additional matching nodes that correspond to one another; and
identifying any nodes in the new data that fail to correspond with a node in the old
data.
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2. The method of claim 1 further comprising requesting identifying data from each of
the new nodes.
3. The method of claim 1 further comprising assigning identifying data of a matching
20 node in the old data to the corresponding matching node in the new data.
4. A method of identifying new nodes on a bus following a reset comprising:
maintaining old data identifying connections between nodes present on the bus
prior to the reset;
25 receiving new data identifying connections between nodes on the bus after the
reset;
identifying a host node in each of the old data and the new data;
identifying one or more nodes connected to the host node in the old data;
identifying one or more matching nodes in the new data similarly connected to the

host node in the new data as the one or more nodes in the old data are connected to the host node in the old data such that the matching nodes in the new data are matched with corresponding nodes in the old data;

identifying nodes in the new data similarly connected to the matching nodes in the new data as nodes in the old data are connected to the corresponding nodes in the old data so as to identify additional matching nodes in the new data matched with corresponding nodes in the old data; and

identifying any nodes in the new data that fail to match with a node in the old data.

5. The method of claim 4 further comprising requesting identifying data from each of the nodes in the new data that fail to match with a node in the old data.

6. The method of claim 4 further comprising assigning a matching node in the new data with identifying data of its corresponding node in the old data.

7. A method of obtaining identifying information for nodes on a bus following a reset comprising:

comparing a new data structure mapping connections between the nodes on the bus after the reset with a previously created data structure mapping connections between nodes on the bus before the reset;

matching nodes on the new data structure to corresponding nodes on the previously created data structure by their connections to other nodes; and

assigning identifying data of one of the corresponding nodes in the previously created data structure to its matching node in the data structure.

8. The method of claim 7 wherein the act of matching begins with identifying nodes on the new data structure whose connections to a host match the connections of corresponding nodes to a corresponding host in the previously created data structure.

9. The method of claim 7 further comprising requesting identifying data from over the bus for any nodes in the new data structure that fail to match with a node in the previously created data structure.

5 10. A computer program product for identifying new nodes on a bus following a reset, the computer program product comprising a computer usable medium having computer program code thereon, said computer program code comprising:

program code for accessing old data identifying connectedness between nodes present on the bus prior to the reset and new data identifying connectedness between nodes
10 present on the bus after the reset;

program code for identifying a host node in the old data and a host node in the new data such that the host nodes in the old and new data become identified as matching nodes corresponding to one another;

program code for identifying nodes in the new data having a same connection to an identified matching node as nodes in the old data to the corresponding matching node so as
15 to identify additional matching nodes that correspond to one another; and

program code for identifying any nodes in the new data that fail to correspond with a node in the old data.

20 11. The computer program product of claim 10 further comprising program code for requesting over the bus identifying data from each of the new nodes.

12. The computer program product of claim 10 further comprising program code for assigning identifying data of a matching node in the old data to the corresponding
25 matching node in the new data.

13. A computer program product for identifying new nodes on a bus following a reset, the computer program product comprising a computer usable medium having computer program code thereon, said computer program code comprising:

30 program code for accessing old data identifying connections between nodes present on the bus prior to the reset;

program code for accessing new data identifying connections between nodes on the bus after the reset;

program code for identifying a host node in each of the old data and the new data;

5 program code for identifying one or more nodes connected to the host node in the old data;

program code for identifying one or more matching nodes in the new data similarly connected to the host node in the new data as the one or more nodes in the old data are connected to the host node in the old data such that the matching nodes in the new data are matched with corresponding nodes in the old data;

10 program code for identifying nodes in the new data similarly connected to the matching nodes in the new data as nodes in the old data are connected to the corresponding nodes in the old data so as to identify additional matching nodes in the new data matched with corresponding nodes in the old data; and

15 program code for identifying any nodes in the new data that fail to match with a node in the old data.

14. The computer program product of claim 13 further comprising program code for requesting over the bus identifying data from each of the nodes in the new data that fail to match with a node in the old data.

20 15. The computer program product of claim 13 further comprising program code for assigning a matching node in the new data with identifying data of its corresponding node in the old data.

25 16. A computer program product for obtaining identifying information for nodes on a bus following a reset, the computer program product comprising a computer usable medium having computer program code thereon, said computer program code comprising:
program code for comparing a new data structure mapping connections between the nodes on the bus after the reset with a previously created data structure mapping
30 connections between nodes on the bus before the reset;

program code for matching nodes on the new data structure to corresponding nodes on the previously created data structure by their connections to other nodes; and

program code for assigning identifying data of one of the corresponding nodes in the previously created data structure to its matching node in the data structure.

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17. The computer program product of claim 16 wherein the program code for matching includes program code for identifying nodes on the new data structure whose connections to a host match the connections of corresponding nodes to a corresponding host in the previously created data structure.

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18. The computer program product of claim 16 further comprising program code for requesting identifying data from over the bus for any nodes in the new data structure that fail to match with a node in the previously created data structure.

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